

REMARKS

Reconsideration and withdrawal of the rejection and the allowance of all claims now pending in the above-identified patent application (*i.e.*, Claims 12-31) are respectfully requested in view of the foregoing amendments and the following remarks.

At the outset, Applicant and his counsel wish to thank the Examiner for her allowance of Claims 27-31 as part of the first Office Action. As will be explained hereinafter, it is submitted that Claims 12-26, as amended by the instant Response, are also in condition for allowance at this time.

Prior to a discussion of the prior art applied by the Examiner against the claims rejected in the initial Office Action, it should be recognized that the present invention provides a surgical instrument for preparing implant beds in a person's lower jaw, along with a related method for producing the implant beds via a drilling element having a spinous shape and a handle affixed thereto. Because of the anatomy of the lower jaw of many patients, which might be particularly weakened due to atrophy or other ailments, prior art implementation methods often do not permit a stable anchoring of the necessary implant posts of sufficient length without the use of further measures.

To overcome the inherent limitations of prior art instruments and methods, the present invention, as now claimed, provides a surgical instrument and related method, which permits a very atraumatic invasive procedure, which readily allows for the quick and complete healing of the implementation point in otherwise healthy patients with a

high rate of success. Specifically, the invention, as now recited by Applicant's claims, provides a surgical instrument for preparing implant beds in a lower jaw of a patient, which includes a drilling element having a spinous shape and a truncated cone with an outer surface line that is smooth and encloses an angle of no more than several degrees with an axis of the truncated cone. The surgical instrument further includes a handle at an angle to the axis of the truncated cone with the spinous shape of the drill element enclosing an angle with the handle.

As explained in Applicant's *Specification* at Page 3, line 18 – Page 4, line 20, it is important that the spine encloses an angle with the handle and that the surgical instrument permits vertical access to the lower jaw of the patient for introducing the implant, even for the patient's back teeth. As such, the angled shape is essential. For preparing the implant bed, the proposed surgical instrument is introduced, in advance, with the top surface of the truncated cone being introduced first, into an opening in the patient's lower jaw produced as further described in Applicant's *Specification*. The surgical instrument used has a diameter of the top surface of the truncated cone which permits penetration through the enlarged borehole in the corticalis as far as the adjacent spongiosa.

With a further introduction of the surgical instrument, because of the conical design of the drilling element, the bore is enlarged; the adjacent bone tissue being forced radially outwards. The construction of the truncated cone, with a low conical angle and its smooth circumferential surface, permits manual introduction of the surgical instrument without a great application of force. It is important that the handle of the surgical instru-

ment is arranged at an angle to the axis of the truncated cone. In this manner, during work with the surgical instrument, an optimum position of the hand enclosing the handle and of the bore element is ensured relative to the opening in the lower jaw. Further, by successive changes of the direction of the surgical instrument (*i.e.*, its penetration section or axial inclination), an enlargement, and also an uplifting, of loosened segments is achieved.

As will be explained in greater detail hereinafter, nowhere in the prior art is a surgical instrument for preparing implant beds in a lower jaw of a patient, which includes a drilling element having a spinous shape and with the spinous shape enclosing an angle with the handle for permitting a substantially atraumatic invasive procedure, either disclosed or suggested.

By the present amendments, Applicant has amended independent Claims 12 and 23 (and, via dependency, Claims 13-22 and 24-26) to now recite that the drilling element of the claimed surgical instrument has a “spinous shape” and that the “spinous shape of said drilling element enclose[s] an angle with said handle.” Subject matter support of the instant claim amendments can be found in Applicant’s *Specification* at, *e.g.*, Page 1, lines 2 – 4; Page 3, line 18 – Page 4, line 11; and FIGS. 1a – 1e.

Applicant has also amended allowed Claims 29 and 30 to correct the spelling of “medially,” as required by the Examiner’s claim objections of the first Office Action.

Turning now, in detail, to an analysis of the Examiner’s prior art rejections of

Applicant's claims, in the first Office Action the Examiner has rejected the subject matter of Claims 12-18 and 23-25 as being anticipated, pursuant to 35 U.S.C. §102(b), by Daily, U.S. Patent No. 5,358, 507. Separately, the Examiner has further rejected Claims 12-21 and 23-26 as being anticipated, pursuant to 35 U.S.C. §102(b) by Carr, U.S. Patent No. 5,733,119. Finally, the Examiner has rejected Claims 12-21 and 23-26 as being anticipated, pursuant to 35 U.S.C. §102(e), by Schuster, U.S. Patent Application Publication No. 2003/0213343. The Examiner has contended that each of the references applied as being anticipatory of several of Applicant's claims teach and suggest various surgical instruments having the same structural elements as the claims enumerated in the various anticipation rejections, notwithstanding differing intended uses.

In reply to the Examiner's anticipation rejections of the first Office Action, Daily discloses a thromboendarterectomy suction dissector for performing coronary, systemic or pulmonary thromboendarterectomy. Carr discloses a dental reto-filling drill tool having drilling device (30), while Schuster shows a screwdriver, which has an axis in the form of an angle with the screwdriver being intended to be held with only a single hand. Two of the references are clearly from outside the dental field of the presently claimed invention, while none of the applied references, it is respectfully submitted, either teaches or suggests a surgical instrument having a drilling element that has a "spinous shape" having a handle at an angle to the axis of a truncated cone of the drilling element with the spinous shape enclosing an angle with the handle, as now claimed. As explained above and in greater detail in Applicant's *Specification*, it is important that the spine of the claimed surgical instrument encloses an angle with the handle, so that the surgical

instrument permits vertical access to the lower jaw of the patient for introducing the implant, even for the patient's back teeth. (Applicant's *Specification* at Page 3, line 18 – Page 4, line 20)

In light of the foregoing, it is respectfully submitted that amended independent Claims 12 and 23 (and all relevant dependent claims) are neither anticipated by, nor obvious over, Daily, Carr or Schuster, whether considered individually or in combination with one another and the totality of the prior art of record.

Accordingly, withdrawal of the Examiner's 35 U.S.C. §102(b) anticipation rejections, which apply Daily, Carr or Schuster, is respectfully requested.

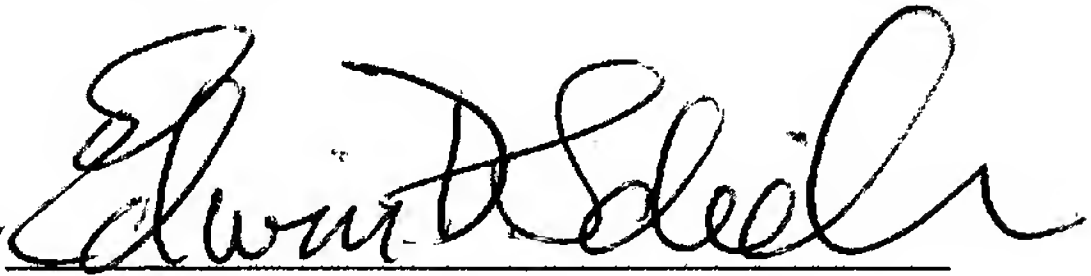
Concerning, finally, the remaining references cited by the Examiner, but not applied in any rejection of Applicant's claims, such additional references have been carefully considered, but are not deemed to adversely affect the patentability of the present invention, as now claimed.

In view of the foregoing, it is respectfully contended that all claims now pending in the above-identified patent application (*i.e.*, Claims 12-31) recite a novel and efficient surgical instrument for preparing implant beds in a lower jaw of a patient, which includes a drilling element having a spinous shape and with the spinous shape enclosing an angle with the handle for permitting a substantially atraumatic invasive procedure, which is patentably distinguishable over the prior art. Accordingly, withdrawal of the outstanding

rejections and the allowance of all claims now pending are respectfully requested and earnestly solicited.

Respectfully submitted,

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- Enc.: 1. Petition for Two-Month Extension of Time for Response; and,
2. EFT for \$230.00 (Two-Month Extension Fee)

The Commissioner for Patents is hereby authorized to charge the Deposit Account of Applicant's Attorney (*Account No. 19-0450*) for any fees or costs pertaining to the prosecution of the above-identified patent application, but which have not otherwise been provided for.